Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Risk Assessment Tool and Guidance (Including guidance on application)

June 2008

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Introduction

Risk assessment is an essential part of the risk management process and is the overall term covering the risk identification, analysis and risk evaluation part of the risk management process (AS/NZS Risk Management Standard 4360:2004).

The management of risk is integral to the business process of all levels in the HSE. This is not only a HSE Board requirement as set out in the HSE's Integrated Risk Management Policy but is also central to the HSE's system of internal control.

Risk Management Process – Overview
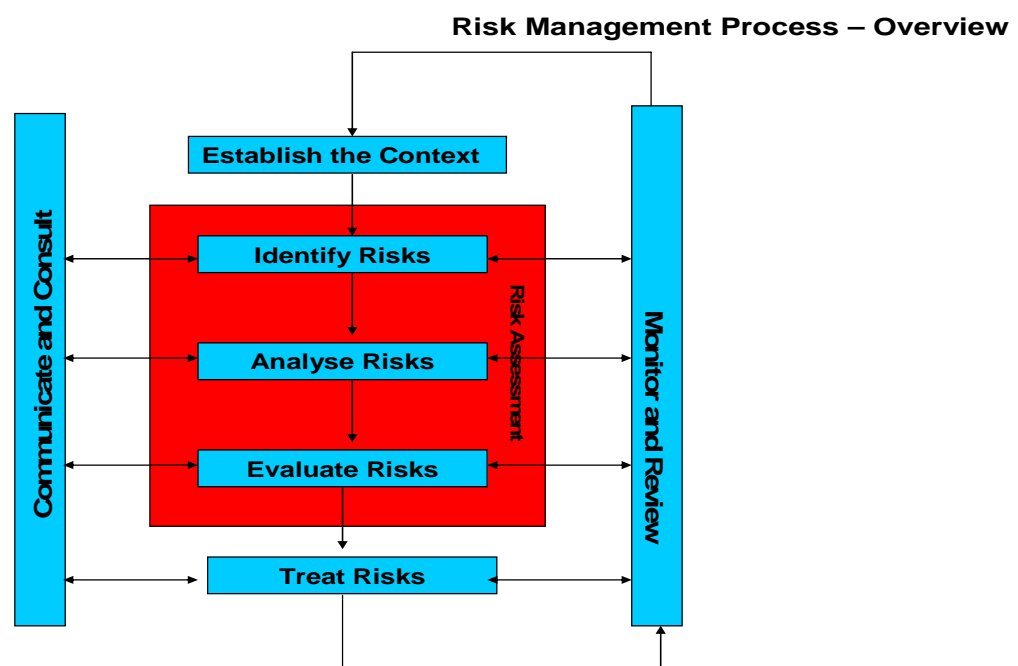
For management to ensure that the time spent on managing risks is proportionate to the risk itself, services should have in place efficient assessment processes covering all areas of risk. The HSE has developed a Risk Assessment Tool to support this process. This tool should be applied uniformly to all processes where risk assessment is required e.g. health and safety risk assessment, risk assessment for the purpose of developing and populating risk registers, project management etc. It is not intended that this tool replace the risk assessment process used in specific clinical or care situations e.g. falls, tissue viability etc.

Guidance on Risk Assessment and the use of the HSE's Risk Assessment Tool

1. Identify the Risks

Risk is defined as "the chance of something happening that will have an impact on the achievement of organisational stated objectives" (HSE 2008).

This step in the risk assessment process seeks to identify the risks to be managed. A risk assessment may concentrate on one or more area of impact relevant to the organisation or activity i.e. it may be specific to a particular project or hazard area e.g. biological hazards or it may be conducted on a more general basis e.g. for the purpose of developing a service or organisational risk register.

It is essential that the employees identifying risks are knowledgeable about the policy, service area, process or activity being reviewed.

When areas of risk have been identified it is important that these are described in a manner that accurately and comprehensively ensures that the exact nature and magnitude of the risk is captured. To assist with this the following approach should be used.

The 'ICC approach' to risk description (Impact, Cause, Context)

- Risk is inherently negative, implying the possibility of adverse impacts. Describe the potential **Impact** if the risk were to materialise.

- Describe the **Causal Factors** that could result in the risk materialising.

- Ensure that the **Context** of the risk is clear, e.g. is the risk 'target' well defined (e.g. staff, patient, department, hospital, etc.) and is the 'nature' of the risk clear (e.g. financial, safety, physical loss, perception, etc.)

Examples:

Injury to staff and service users (Impact) due to poor maintenance of flooring (Causal Factor) in the reception area (Context).

Project overruns resulting in financial loss (Impact) due to the unavailability of key project staff (Causal factor) within Procurement (Context).

2. Analyse the Risk

Risk analysis is about developing an understanding of the risks identified. In subjecting a risk to analysis it is essential that account is taken of the existing control measures.

2.1 Describe of the existing control measures

These include all measures put in place to eliminate or reduce the risk and include processes, policies, procedures, guidelines and engineering controls, training, emergency arrangements, preventative maintenance controls, protocols, team working, etc.

2.2 Make a judgement on the adequacy of the existing control measures.

When examining the existing control measures, consideration should be given to their adequacy, method of implementation and level of effectiveness in minimising risk to the lowest reasonably practicable level.

2.3. Rate the risk in terms of determining the <u>likelihood</u> and the <u>impact</u> of the risk occurring.

Risk is measured in terms of **likelihood** and **impact** i.e. the likelihood of an event occurring combined with its impact (consequence). The methodology for measuring risk in this way plots a single ascribed value of likelihood against a single ascribed value of impact and therefore reduces risk to a single, easily comparable value.

This process, except in the relatively rare case where statistical data are available, uses informed but subjective judgement in assigning the values for likelihood and impact. If different risks are to be compared across the HSE, it is necessary to minimise the variation in the judgement applied to the values of likelihood and impact assigned to a risk. This requires the adoption of a HSE-wide, standardised approach to the assignment of likelihood and impact.

Two elements are determined when assessing the level of risk posed by the risk that has been identified;

(i) The <u>likelihood</u> that a risk may occur or reoccur.

(ii) The <u>impact</u> of harm[1] to service users, staff, services, environment or the organisation.

Likelihood Scoring

The likelihood table (table 1) is used to assess the likelihood of the risk occurring

TABLE 1:   LIKELIHOOD SCORING

Rare/Remote (1)		Unlikely (2)		Possible (3)		Likely (4)		Almost Certain (5)	
Actual Frequency	Probability	Actual Frequency	Probability	Actual frequency	Probability	Actual Frequency	Probability	Actual Frequency	Probability
Occurs every 5 years or more	1%	Occurs every 2-5 years	10%	Occurs every 1-2 years	50%	Bimonthly	75%	At least monthly	99%

Likelihood scoring is based on the expertise, knowledge and actual experience of the group scoring the likelihood. In assessing likelihood, it is important to consider the nature of the risk. Risks are assessed on the probability of future occurrence; how likely is the risk to occur? How frequently has this occurred?

It should be noted that in assessing risk, the likelihood of a particular risk materialising depends upon the effectiveness of existing controls. In assessing the likelihood, consideration should be given to the number and robustness of existing controls in place, with evidence available to support this assessment. Generally the higher the degree of controls in place, the lower the likelihood.

The assessment of likelihood of a risk occurring is assigned a number from 1-5, with 1 indicating that there is a remote possibility of its occurring and 5 indicating that it is almost certain to occur.

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[1] Harm is defined as "a detrimental impact on the organisation's stated objectives, including physical, psychological, financial and environmental harm" (HSE 2008)

Impact Scoring

In developing a single risk matrix the HSE Risk Management Steering Group considered a range of types of harm that can occur across the HSE. The following areas of risk must be managed to prevent or minimise harm occurring.

- **Injury to Service User/Staff/Public Risks**

  Risks which may contribute to the physical or psychological harm of an individual.

- **Service User Experience Risks**

  Risks which threaten the delivery of a service provision to service users in terms of quality, in a comfortable, caring and safe environment, delivered in a calm and reassuring way; having information to make choices, to feel confident and to feel in control; being listened to and talked to as an equal; being treated with honesty, respect and dignity.

- **Compliance with Standards (Statutory, Clinical, Professional and Management) Risks**

  Risks associated with compliance with requirements in relation to the standards set out in relation to the organisation and delivery of high quality services i.e. Statutory, Clinical, Professional and Management Standards.

- **Objectives and Project Risks**

  Risks relating to the procedures/technologies etc employed to achieve particular objectives and projects.

- **Business Continuity Risks**

  Risks which threaten the organisation's ability to deliver its services and serve the community.

- **Adverse Publicity/Reputation Risks**

  Risks to the public reputation of the organisation and their effects.

- **Financial Loss Risks**

  Risks relating to procedures/systems/accounting records which expose the organisation to financial risks, including risks to assets.

- **Environment Risks**

  Risks which threaten the prevention, limitation, elimination, abatement or reduction of environmental pollution and the preservation of a quality environment.

To determine the **impact** of this harm should it occur, each risk area has been assigned descriptors over 5 levels ranging from negligible to extreme harm. In scoring **impact**, the anticipated outcome of the risk is grade from 1-5, with 5 indicating a more serious Impact, as defined in the table 2 below.

TABLE 2: IMPACT SCORING

Score	Impact
1	Negligible
2	Minor
3	Moderate
4	Major
5	Extreme

Each area of risk, in relation to the impact scoring, is outlined in table 3 on the next page.

Table 3: Impact Table

IMPACT	Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)
Injury	Adverse event leading to minor injury not requiring first aid. No impaired Psychosocial functioning	Minor injury or illness, first aid treatment required <3 days absence < 3 days extended hospital stay Impaired psychosocial functioning greater than 3 days less than one month	Significant injury requiring medical treatment e.g. Fracture and/or counselling. Agency reportable, e.g. HSA, Gardaí (violent and aggressive acts). >3 Days absence 3-8 Days extended hospital Stay Impaired psychosocial functioning greater than one month less than six months	Major injuries/long term incapacity or disability (loss of limb) requiring medical treatment and/or counselling Impaired psychosocial functioning greater than six months	Incident leading to death or major permanent incapacity. Event which impacts on large number of patients or member of the public Permanent psychosocial functioning incapacity.
Service User Experience	Reduced quality of service user experience related to inadequate provision of information	Unsatisfactory service user experience related to less than optimal treatment and/or inadequate information, not being to talked to & treated as an equal; or not being treated with honesty, dignity & respect - readily resolvable	Unsatisfactory service user experience related to less than optimal treatment resulting in short term effects (less than 1 week)	Unsatisfactory service user experience related to poor treatment resulting in long term effects	Totally unsatisfactory service user outcome resulting in long term effects, or extremely poor experience of care provision
Compliance with Standards (Statutory, Clinical, Professional & Management)	Minor non compliance with internal standards. Small number of minor issues requiring improvement	Single failure to meet internal standards or follow protocol. Minor recommendations which can be easily addressed by local management	Repeated failure to meet internal standards or follow protocols. Important recommendations that can be addressed with an appropriate management action plan.	Repeated failure to meet external standards. Failure to meet national norms and standards / Regulations (e.g. Mental Health, Child Care Act etc). Critical report or substantial number of significant findings and/or lack of adherence to regulations.	Gross failure to meet external standards Repeated failure to meet national norms and standards / regulations. Severely critical report with possible major reputational or financial implications.
Objectives/Projects	Barely noticeable reduction in scope, quality or schedule.	Minor reduction in scope, quality or schedule.	Reduction in scope or quality of project; project objectives or schedule.	Significant project over – run.	Inability to meet project objectives. Reputation of the organisation seriously damaged.
Business Continuity	Interruption in a service which does not impact on the delivery of service user care or the ability to continue to provide service.	Short term disruption to service with minor impact on service user care.	Some disruption in service with unacceptable impact on service user care. Temporary loss of ability to provide service	Sustained loss of service which has serious impact on delivery of service user care or service resulting in major contingency plans being involved	Permanent loss of core service or facility. Disruption to facility leading to significant 'knock on' effect
Adverse publicity/ Reputation	Rumours, no media coverage. No public concerns voiced. Little effect on staff morale. No review/investigation necessary.	Local media coverage – short term. Some public concern. Minor effect on staff morale / public attitudes. Internal review necessary.	Local media – adverse publicity. Significant effect on staff morale & public perception of the organisation. Public calls (at local level) for specific remedial actions. Comprehensive review/investigation necessary.	National media/ adverse publicity, less than 3 days. News stories & features in national papers. Local media – long term adverse publicity. Public confidence in the organisation undermined. HSE use of resources questioned. Minister may make comment. Possible questions in the Dáil. Public calls (at national level) for specific remedial actions to be taken possible HSE review/investigation	National/International media/ adverse publicity, > than 3 days. Editorial follows days of news stories & features in National papers. Public confidence in the organisation undermined. HSE use of resources questioned. CEO's performance questioned. Calls for individual HSE officials to be sanctioned. Taoiseach/Minister forced to comment or intervene. Questions in the Dail. Public calls (at national level) for specific remedial actions to be taken. Court action. Public (independent) Inquiry.
Financial Loss (per local Contact)	<€1k	€1k – €10k	€10k – €100k	€100k – €1m	>€1m
Environment	Nuisance Release.	On site release contained by organisation.	On site release contained by organisation.	Release affecting minimal off-site area requiring external assistance (fire brigade, radiation, protection service etc.)	Toxic release affecting off-site with detrimental effect requiring outside assistance.

How to use the Impact scoring table

Step 1

Choose the most appropriate Risk Category(s) into which the risk identified falls e.g. Injury to patient, staff or public. In many instances, you will be able to score the risk under a number of categories (e.g. the risk of a serious medication incident may result in injury to a patient, be a result of non-compliance with an internal clinical standard and have the potential to attract adverse media attention). All areas should be considered when scoring.

Step 2

Assess the impact of that risk being realised for each risk area. Working along the table, select the Impact that most closely matches each e.g. minor. In instances where several of the risk categories are appropriate, all of these risks should be scored separately and the highest impact category score is the score given to that risk e.g. if it scored moderate for injury and minor for compliance with standards, the overall impact assigned should be moderate (being the higher of the two)

Step 3

Assign an impact score. This is the number assigned to the impact chosen and appears at the top of the selected column i.e. in the case of a moderate impact the scoring is 3.

Guidance on the Initial Risk Rating.

Having established the likelihood and impact scores, the scores should be plotted on the Risk Matrix (see table 4 on the next page) and to determine the rating of the risk being assessed in terms of a colour and a numerical score for the risk (e.g. a moderate impact 3 and a possible likelihood 3 will result in a rating of an amber 9).

- The high risks are scored between 15 and 25 and are coloured Red.

- Medium risk are scored between 6 and 12 and are coloured Amber.

- Low risks are scored between 1 and 5 and are coloured Green.

Table 4: HSE Risk Matrix (Combining Impact and Likelihood)

Risk Matrix	Negligible(1)	Minor(2)	Moderate(3)	Major(4)	Extreme(5)
Almost Certain (5)	5	10	15	20	25
Likely (4)	4	8	12	16	20
Possible (3)	3	6	9	12	15
Unlikely (2)	2	4	6	8	10
Rare/Remote (1)	1	2	3	4	5

Example 1: Likelihood of 3 (Possible) x Impact of 2 (Minor) = 2 x 3 = 6 (Amber)

Example 2: Likelihood of 2 (Unlikely) x Impact of 3 (Moderate) = 3 x 2 = 6 (Amber).

3. Evaluate the Risks

The purpose of risk evaluation is to make decisions based on the outcome of the risk analysis regarding which risks require treatment and the priorities of that treatment. Depending on the risk rating and the adequacy of the current controls in place an evaluation is made whether to:

- accept the risk or

- treat the risk by:

    i) Avoiding the risk,

    ii) Transferring the risk or

    iii) Controlling the risk.

Criteria used to make decisions regarding accepting or treating the risk should be consistent with the defined internal, external and risk management contexts and taking account of the service objectives and goals.

Accepting the risk.

A risk is called acceptable if it is not going to be treated. Accepting a risk does not imply that the risk is insignificant. Risks in a service may be accepted for a number of reasons,

- The level of the risk is so low that specific treatment is not appropriate within available resources (based on, for example, a cost benefit analysis)

- The risk is such that no treatment option is available. For example, the risk that a project might be terminated following a change of government is not within the control of the HSE.

- The opportunities presented outweigh the threats to such a degree that the risk is justified.

> **Steps 1-3 above conclude the Risk Assessment process, it is however essential that in terms of managing assessed risks that a treatment (action) plan is put in place against those risks that have been evaluated as requiring treatment.**

4. Treat the Risks

There are three basic methods of treating (actioning) the risk, these are:

4.1. Avoid the Risk

This is achieved by either deciding not to proceed with the activity that contains an unacceptable risk, choosing an alternate more acceptable activity, which meets the objectives and goals of the organisation, or choosing an alternative and less risky methodology or process within the activity.

4.2. Transfer the Risk

Risk transfer transmits the organisation's risk to an outside party. The most common method of risk transfer is the purchase of insurance or indemnity. The cost and conditions of such a transfer will be dependant on the level of assurance the organisation can provide to the insurer in terms of the likelihood of a claim occurring. The insurer would require information on type of risk, the robustness of the systems that the organisation has in place and the claims history to date. An example of this is clinical, public and employee liability coverage.

4.3. Control the Risk

This is the most commonly used treatment option as it is focused on reducing the likelihood of the risk occurring or the impact of the risk if it occurs, or both. Note that there is a trade off between the level of risk and the cost of reducing those risks to an acceptable level. The most effective methods of risk control are those which redesign the systems and processes so that the potential for an adverse outcome is reduced.

When considering additional controls the following hierarchy should apply:

- If practicable, eliminate the risks altogether, or combat the risks at the source, e.g. use a safe substance instead of a dangerous one

- If elimination of the risk is not practicable, try to reduce the risk at the source by substituting the material or process with a less hazardous one or installing or using additional equipment, e.g. by use of a low voltage electrical appliance, changing the drug packaging

- Finally, reduce the risk via administrative controls and safe systems of work e.g. policies, procedures and guidelines or by, use of personal protective equipment (PPE). Use of PPE is the weakest control measure on the hierarchy and should, if being employed, be used in conjunction with other control measures.

In order to ensure that treatment plans are implemented the following should be documented and subjected to ongoing monitoring and review as part of the normal business process of the service/area in which the risks are to be treated.

The treatment plans should include:
- Proposed actions
- Resource requirements
- Person responsible for action
- Timeframes (date for review and dates for actions to be completed)

Reference and for further information:OQR010 20080229 v3 Developing and Populating a Risk Register Best Practice Guidance

HSE (2008) Quality and Risk Taxonomy Report

HSE RISK ASSESSMENT TOOL

1. IMPACT TABLE

	Negligible	Minor	Moderate	Major	Extreme
Injury	Adverse event leading to minor injury not requiring first aid. No impaired Psychosocial functioning	Minor injury or illness, first aid treatment required <3 days absence < 3 days extended hospital stay Impaired psychosocial functioning greater than 3 days less than one month	Significant injury requiring medical treatment e.g. Fracture and/or counselling. Agency reportable, e.g. HSA, Gardaí (violent and aggressive acts). >3 Days absence 3-8 Days extended hospital Stay Impaired psychosocial functioning greater than one month less than six months	Major injuries/long term incapacity or disability (loss of limb) requiring medical treatment and/or counselling Impaired psychosocial functioning greater than six months	Incident leading to death or major permanent incapacity. Event which impacts on large number of patients or member of the public Permanent psychosocial functioning incapacity.
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2. LIKELIHOOD SCORING

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3. RISK MATRIX

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